WHAT IS CLAIMED IS:

1. An apparatus for detecting a block noise generated on an input video signal that has been code and decoded per pixel block, the apparatus comprising:

a differentiator to differentiate the input video signal per pixel block to obtain a differentiated signal;

a detector to detect impulses of the differentiated signal to obtain a detection signal carrying the impulses;

an integrator to integrate the detection signal; and

a determinator to compare the integrated detection signal and a reference signal to determine whether the block noise is generated on the input video signal.

2. The apparatus according to claim 1 wherein each pixel block has a predetermined number of pixels in both the horizontal and the vertical directions of the pixel block, the integrator integrating the detection signal in the horizontal and the vertical directions for a period corresponding to the pixel block.

3. The apparatus according to claim 2 wherein the determinator includes:

a counter to count the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the input video signal;

a plurality of delay sections each delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals for succeeding images in the predetermined unit of image; and

a median section to select a middle count signal

among the count signals, which is the middle in level, the middle count signal being compared with the reference signal.

4. An apparatus for reducing a block noise generated on an input video signal that has been code and decoded per pixel block, the apparatus comprising:

a differentiator to differentiate the input video signal per pixel block to obtain a differentiated signal and detect impulses of the differentiated signal, thus outputting a detection signal carrying the impulses;

a filter to filter the detection signal to obtain a correction signal;;

a delay section to delay the input video signal by a predetermined period; and

an adder to add the correction signal to the delayed video signal to cancel a difference in signal level on the boundary between a first pixel block on which a block noise is generated and a second pixel block adjacent to the first pixel block of the input video signal.

5. The apparatus according to claim 4 further comprising:

a detector to detect the block noise per predetermined unit of image carried by the input video signal; and

a switch to pass the detection signal carrying the impulses to the filter when the block noise is detected.

6. The apparatus according to claim 5 wherein each pixel block has a predetermined number of pixels in both the horizontal and the vertical directions of the pixel block, the detector including:

an integrator to integrate the detection signal in the horizontal and the vertical directions for a

period corresponding to the pixel block; and

a determinator to compare the integrated detection signal and a reference signal to determinate whether the block noise is generated.

7. The apparatus according to claim 6 wherein the determinator includes:

a counter to count the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the video signal;

a plurality of delay sections each delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals for succeeding images in the predetermined unit of image; and

a median section to select a middle count signal among the count signals, which is the middle in level, the middle count signal being compared with the reference signal.

8. A method of detecting a block noise generated on an input video signal that has been code and decoded per pixel block, comprising the steps of:

differentiating the input video signal per pixel block to obtain a differentiated signal;

detecting impulses of the differentiated signal to obtain a detection signal carrying the impulses;

integrating the detection signal; and

comparing the integrated detection signal and a reference signal to determine whether the block noise is generated on the input video signal.

9. The method according to claim 8 wherein each pixel block has a predetermined number of pixels in both the horizontal and the vertical directions of the pixel block, the integrating step including the step of integrating the detection signal in the horizontal and

the vertical directions for a period corresponding to the pixel block.

10. The method according to claim 9 wherein the comparing step includes the steps of:

counting the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the input video signal;

delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals in the predetermined unit of image; and

selecting a middle count signal among the count signals, which is the middle in level, the middle count signal being compared with the reference signal.

11. A method of reducing a block noise generated on an input video signal that has been code and decoded per pixel block, comprising the steps of:

differentiating the input video signal per pixel block to obtain a differentiated signal and detect impulses of the differentiated signal, thus outputting a detection signal carrying the impulses;

filtering the detection signal to obtain a correction signal;

delaying the input video signal by a predetermined period; and

adding the correction signal to the delayed video signal to cancel a difference in signal level on the boundary between a first pixel block on which a block noise is generated and a second pixel block adjacent to the first pixel block of the input video signal.

12. The method according to claim 11 further comprising the steps of:

detecting the block noise per predetermined unit of image carried by the input video signal; and

passing the detection signal carrying the impulses to the filter when the block noise is detected.

13. A computer-implemented method of detecting a block noise generated on an input video signal that has been code and decoded per pixel block, comprising the steps of:

differentiating the input video signal per pixel block to obtain a differentiated signal;

detecting impulses of the differentiated signal to obtain a detection signal carrying the impulses;

integrating the detection signal; and

comparing the integrated detection signal and a reference signal to determine whether the block noise is generated on the input video signal.

14. A computer-implemented method of reducing a block noise generated on an input video signal that has been code and decoded per pixel block, comprising the steps of:

differentiating the input video signal per pixel block to obtain a differentiated signal and detect impulses of the differentiated signal, thus outputting a detection signal carrying the impulses;

filtering the detection signal to obtain a correction signal;

delaying the input video signal by a predetermined period; and

adding the correction signal to the delayed video signal to cancel a difference in signal level on the boundary between a first pixel block on which a block noise is generated and a second pixel block adjacent to the first pixel block of the input video signal.

15. A processor readable medium storing program code for causing a computer to detect a block noise generated on an input video signal that has been code and decoded

per pixel block, comprising:

first program code means for differentiating the input video signal per pixel block to obtain a differentiated signal;

second program code means for detecting impulses of the differentiated signal to obtain a detection signal carrying the impulses;

third program code means for integrating the detection signal; and

fourth program code means for comparing the integrated detection signal and a reference signal to determine whether the block noise is generated on the input video signal.

16. A processor readable medium storing program code for causing a computer to reduce a block noise generated on an input video signal that has been code and decoded per pixel block, comprising:

first program code means for differentiating the input video signal per pixel block to obtain a differentiated signal and detect impulses of the differentiated signal, thus outputting a detection signal carrying the impulses;

second program code means for filtering the detection signal to obtain a correction signal;

third program code means for delaying the input video signal by a predetermined period; and

fourth program code means for adding the correction signal to the delayed video signal to cancel a difference in signal level on the boundary between a first pixel block on which a block noise is generated and a second pixel block adjacent to the first pixel block of the input video signal.